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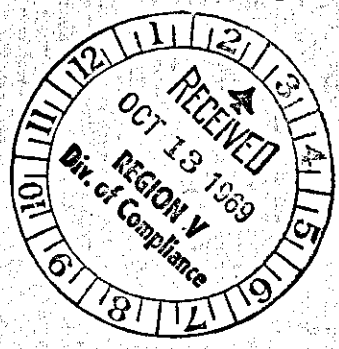

Memo to File

DEPARTMENT OF THE NAVY, U. S. NAVAL RADIOLOGICAL DEFENSE LABORATORY
SAN FRANCISCO, CALIFORNIA - LICENSE NO. 4-487-3
INDEPENDENT SURVEY OF PORTION OF BUILDING 815, HUNTERS POINT

On September 15-16, Building 815, the main headquarters of NRDL at Hunters Point, was visited for the purpose of talking with Mr. Al Smith, Head, Health Physics Division, and Mr. Gene Tochlin, Assistant Head, Health Physics Division, in connection with the anticipated closure of NRDL. Mr. Smith stated that, for all intents and purposes, NRDL will cease to exist as of November 3, 1969. At this time the building will transfer to the San Francisco Bay Naval Shipyard. Mr. Smith stated that, in view of the fact that all materials might not have been removed from the building at that time, certain of the health physics personnel may transfer to the shipyard, where it will be possible for them to continue their duties in clearing the building for permanent release. Mr. Smith stated that he has been in correspondence with DML concerning this handling of material and facilities. In connection with the total NRDL facilities, Mr. Smith stated that facilities to be vacated include Building 815, a total of six floors. Radioactive materials were used on five of the floors. He said that the survey and decontamination is essentially complete on the top four floors of this building. Additional facilities which will require clearance are Building 816, housing the Van de Graff in which tritium containing foils were used. He stated that decontamination is proceeding in this facility at the present time. Building 506-529, housing the Cockroft-Walton accelerator, also used tritium containing foils and will need to be surveyed for release. Area 707 was used as the waste storage area for NRDL. Mr. Smith stated that some contamination exists on the asphalt in this area and that the asphalt will need to be removed prior to the release survey. The other area remaining consists of the 364 Area, in which liquid waste were stored in a liquid waste facility. Piping and pumps associated with this facility will need to be removed and transferred as waste or decontamination. Contaminated cement in the area may require removal before release.

Mr. Smith stated that some of the things which may delay the vacation of the facilities include an 800-curie cobalt-60 source scheduled for transfer but presently awaiting the design and construction of a DOT approved

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overcoat to house the old ICC 55 shield prior to shipment. Mr. Smith said that NRDL also has certain materials on San Clemente Island which include two 30,000-curie strontium-90 devices and two 250-millicurie plutonium-238 exposure chambers where custody will have to be transferred to another licensed activity. Mr. Smith said that there are also two RTG-21 SNAP devices which are not subject to the NRDL license but are under the jurisdiction of the Naval Facilities Engineering Command and are located at San Clemente Island.

In connection with the surveys of Building 815, Mr. Smith said that it is planned to keep the seventh floor cafeteria operating as a canteen until the building is completely closed. As materials are removed and the necessary surveys complete the various floors will be closed down and secured. Mr. Smith said that in areas where decontamination and surveys have been completed, rooms will be secured and locked following the AEC survey. He noted that certain areas on various floors are in use for storage of electronics equipment to limit pilferage. He stated that when all equipment in these rooms has been released from storage, the final AEC survey will be requested.

Mr. Smith said that, at this time, there was no radioactive material above the second floor of the building. Present status of the various floors is as follows. The seventh floor consists of the cafeteria and kitchen. No material has ever been used in this area and no decon or survey work is underway. The sixth floor includes chemistry laboratories which were utilizing unsealed materials including alpha emitters. Decontamination of certain laboratory areas is underway. Most rooms have been surveyed and wiped. The fifth floor was used by Biomedical Division, utilizing unsealed carbon-14 and tritium containing compounds. No detectable activity is present on the survey or wipe. Decontamination and survey of this floor is substantially complete. On the fourth floor, use was limited to sealed sources only. No activity has been found by NRDL on surveys or wipes and decontamination is complete. On the third floor there was no use of licensed materials. NRDL surveys reveal no detectable activity. The second floor included administrative areas and health physics. All areas have been checked and found clean except for the health physics area which is currently in use. The first floor area included shops and administrative offices. It is presently used as a packing and shipping location for materials and equipment. The first floor is also the location of the main isotope storage facility for the building. Decontamination and release surveys of this area by NRDL are now beginning.

Confirmatory surveys of Building 815 were begun by CO:V on September 15 and continued on September 16. See the attached floor plans of the sixth floor to identify areas surveyed on the specified date, the laboratory layout, and extent of the survey.

Surveys in all rooms consisted of a brief beta-gamma survey using a Victoreen Thyac II survey meter, model No. 489, serial No. 223. The instrument background in Building 815 ranges from .01 to .02 mr/hr. The survey was performed using headphones to detect radiation levels or points of minor contamination. Alpha surveys were also performed in each room using the LRL alpha survey meter supplied by Health Chemistry, instrument No. 5V352. The subject instrument uses an air proportional chamber and has no significant background. The survey was performed using the audible counts as an indicator of alpha activity. In selected representative laboratory and office areas, wipes were collected from floors, benches and hoods for evaluation of surface contamination. These wipes were counted at the Region V Office on an NMC PC-3A windowless gas flow proportional counter. Wipe identification consists of a three-number sequence, the first number being the day of the month, the second number the room number in which the wipe was collected, and the third number the wipe number collected in that room. For example, a wipe in the hood in Room 634 collected on September 15, 1969, (i.e., the hood wipe was wipe No. 1 in Room 634) would be 15-634-1. The results of wipe tests are attached as data sheets.

Additional surveys of hood plenum spaces from which filters had been removed were made for alpha and beta-gamma activity in a sampling of the laboratories. Such hoods surveys are identified by green shading on the floor plan showing the survey locations.

On September 15, the following rooms were surveyed: Room 636, 634, 624, 622, 620, 616, 601, 604, 608, 607, 615 and 615A, 619, 629 and 631. Beta-gamma radiation levels were less than 0.03 mr/hr in all rooms except 624, 622 and 620, in which they were less than 0.04 mr/hr. There was no detectable alpha activity revealed in any of the surveys performed. All wipe samples collected in these rooms revealed no detectable activity above background. On September 16, the following rooms were surveyed: 637, 639, 647, 635, 633, 627, 621, 617, 600, 618, 614, 640, 685, 687, 681, 693, 683A, 679, 677, 671 and 671A. Beta-gamma radiation levels in all cases were less than 0.03 mr/hr with no detectable alpha activity except as noted. In Room 618, formerly used for storage and an air sampler location, a uranium-232 sealed source of 367,000 dpm was located. The licensee was advised, the source remove, wipes collected at the position occupied by the source revealed no detectable activity. The survey of Room 640 revealed approximately 0.05 mr/hr beta-gamma (approximately 200 cpm) and approximately 150 cpm (300 dpm) alpha adjacent to the sink drain in this laboratory. A wipe sample collected from the sink drain showed no detectable activity above background. Room 685 contained a hood back panel which was marked as being alpha contaminated at one spot. Measurements revealed approximately 800 alpha cpm (approximately 1600 dpm). A wipe of this spot revealed no activity above background. The licensee disposed of this panel immediately following the survey. Room 679 contained

a stainless steel fume hood sill plate which showed less than 0.05 mr/hr beta-gamma and approximately 500 cpm (approximately 1000 dpm) alpha activity on survey. A wipe collected from this location showed a maximum of 33 cpm alpha and beta-gamma activity above background. The licensee disposed of this sill plate immediately following the survey.

Room 677, the sink in this laboratory showed approximately 100 cpm (200 dpm) alpha activity on survey. The wipe taken in the sink revealed no removable activity. The licensee decontaminated the sink to no detectable activity levels immediately following the survey.

Room 669, the sink in this laboratory showed beta-gamma levels to 0.05 mr/hr (350 cpm) beta gamma. No wipe was collected in this sink. The level was below the de minimus levels. Room 671 and 671A, a spot on a bench was observed to have an alpha count rate of 600 cpm (1200 dpm). A wipe taken of the bench at this location revealed no activity above background.

On the basis of surveys performed on September 15 and 16, 1969, all rooms surveyed meet the de minimus requirements. The licensee's records of surveys and wipe tests of these facilities must be reviewed prior to final release.

ORIGINAL SIGNED BY
H. S. NORTH

H. S. North
Radiation Specialist

CO:V:HSN

Enclosure:
Surveys

cc: J. R. Roeder, CO:HQ, w/encls.
H. Bassin, DML, HQ, w/encls.